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Technology Transfer at the University of Dayton: Out of the Lab and into the Marketplace

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**TECHNOLOGY TRANSFER AT THE UNIVERSITY OF DAYTON:
OUT OF THE LAB AND INTO THE MARKETPLACE**

DAYTON, Ohio -- A growing number of discoveries by University of Dayton researchers are making their way out of campus and government laboratories and into the marketplace.

UD's portfolio of 84 patents has more than doubled in five years, and the University has entered into 50 licensing agreements with companies around the world, according to Lloyd Huff, associate director for special projects in the University of Dayton Research Institute (UDRI). In 1990, UD won a Technology Achievement Award from the Dayton Area Technology Network for the University's efforts to contribute to "the advancement of technology and economic growth in southwest Ohio."

In fiscal year 1991, UD researchers received eight patents on inventions ranging from an improved gas chromatography method to an ultrasonic scanning system for non-destructive inspection of new aerospace materials. In the same year, UD signed licensing agreements with:

* Wright-Patterson Air Force Base for CRACKS90, a software system to analyze crack growth behavior in aircraft;

* a major instrument company for a gas chromatography method;

* a large chemical company for new, high-performance resin materials; and

* NASA-Langley Research Center for MATE, a software system used to evaluate materials in thermal/mechanical fatigue tests.

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A UDRI marketing brochure lists 20 technologies currently available for commercialization. Inventions range from a "phase-change" material that, among other uses, can be put in wallboard to keep houses warm in the winter and cool in the summer to ceramic materials that control the release of drugs.

Although such everyday products as personal computers, digital watches and graphite tennis rackets grew out of federally funded research and development projects, commercializing scientific research can be akin to playing the lottery. Despite glowing market projections and industrial interest, universities are never sure when--or if--an invention might make it to the marketplace. "Every now and then we have a major success, but we certainly can't schedule such events," says John Wurst, interim director of UDRI. "For every millionaire's story you hear, there must be a thousand human failure stories that never get told," Huff adds.

For instance, what Huff describes as one of the University's "most exciting and promising" inventions--ceramic bone implants for dental and orthopedic surgery--was licensed to a California start-up company that went bankrupt.

Other tech transfer stories are happier tales. In 1988, Rolls Royce and the Interturbine Group of Companies entered into an exclusive worldwide license agreement with UD to market an economical fluorocarbon cleaning process for gas turbine engines that they call the "Dayton Process."

"The process has tremendous commercial potential because it can save users of gas turbine engines literally millions of dollars in repair or replacement costs," Huff says.

The University is also part-owner of Insystems, a Silicon Valley company that markets a defect-detection system that uses a holographic inspection technique UD researchers developed for the Air Force. Insystems uses three-dimensional imaging to locate defects in integrated circuit photomasks and wafers.

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UD is also in the software licensing business. The University's MAGNA program, which is useful in aircraft impact simulation and failure analysis, has been licensed to more than a dozen companies. Software programs are also being licensed in the areas of vibration damping and structural analysis.

The University of Dayton Research Institute employs more than 400 scientists, engineers and support staff in laboratories on campus and at Wright-Patterson Air Force Base, Williams Air Force Base, Edwards Air Force Base and the NASA/Goddard Space Flight Facility/Wallops Flight Facility on Wallops Island, Va. In fiscal year 1991, UDRI performed a record $37 million in sponsored research.

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EDITOR'S NOTE: For media interviews, contact either **Lloyd Huff** or **John Wurst** in the University of Dayton Research Institute at (513) 229-2113.